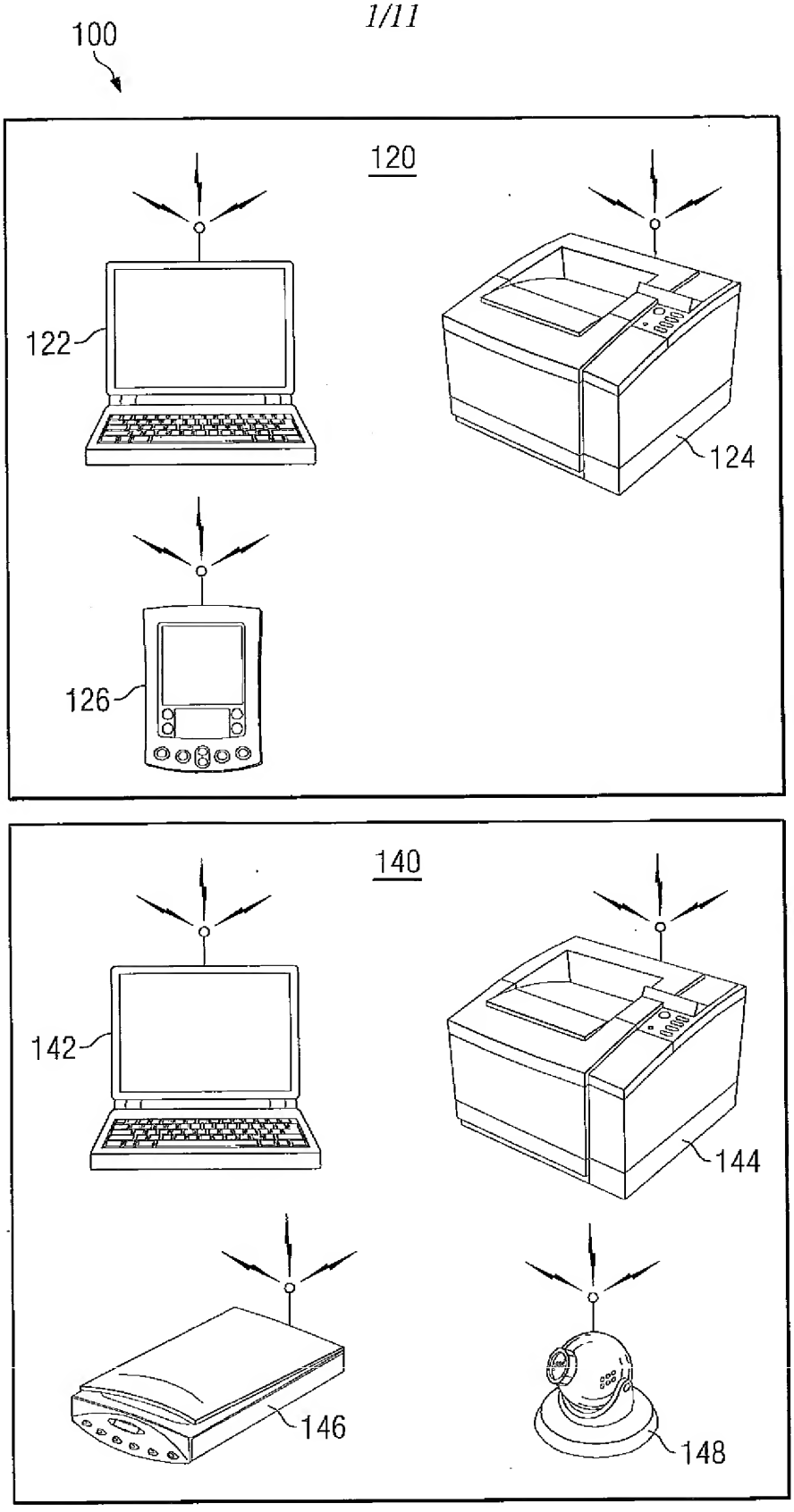

FIG. 1

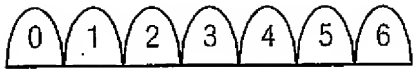

FIG. 2

	t0	t1	t2	t3	t4	t5	t6
CODE 1	0	1	2	3	4	5	6
CODE 2	0	2	4	6	1	3	5
CODE 3	0	3	6	2	5	1	4
CODE 4	0	4	1	5	2	6	3
CODE 5	0	5	3	1	6	4	2
CODE 6	0	6	5	4	3	2	1

FIG. 5

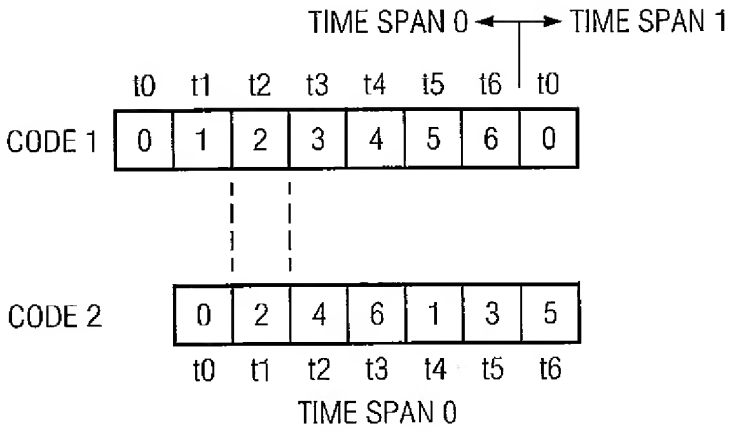

FIG. 6

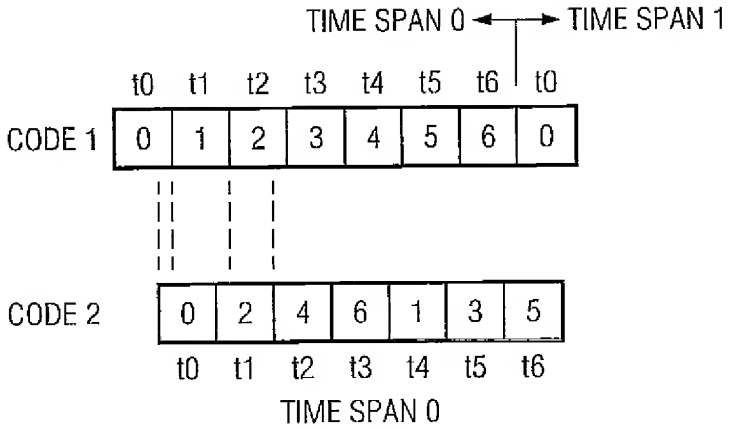

FIG. 7

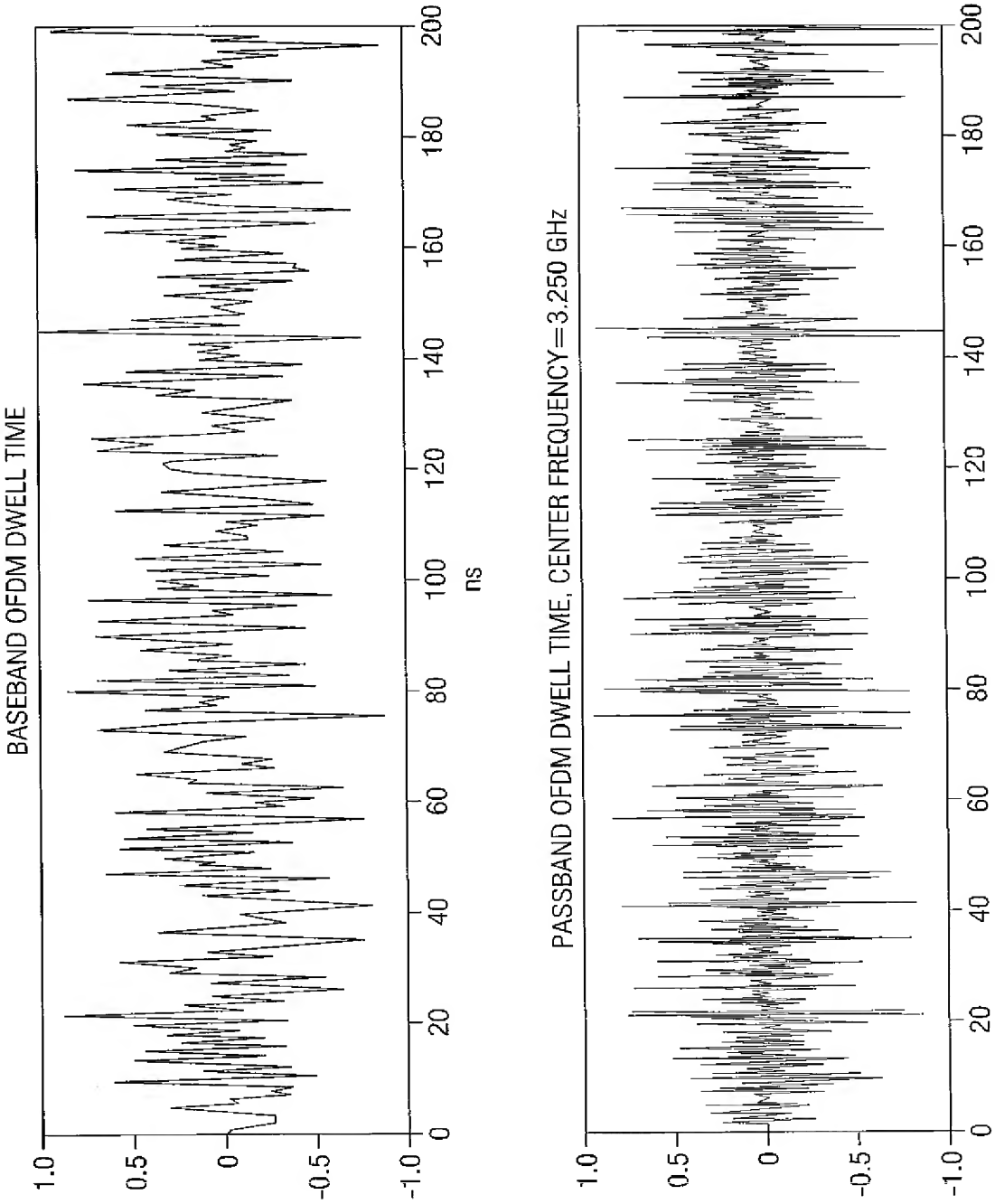
BASEBAND OFDM DWELL TIME
1.0
0.5
0
-0.5
-1.0
0
20
40
60
80
100
120
140
160
180
200
ns
PASSBAND OFDM DWELL TIME, CENTER FREQUENCY=3.250 GHz
1.0
0.5
0
-0.5
-1.0
0
20
40
60
80
100
120
140
160
180
200
ns

FIG. 3

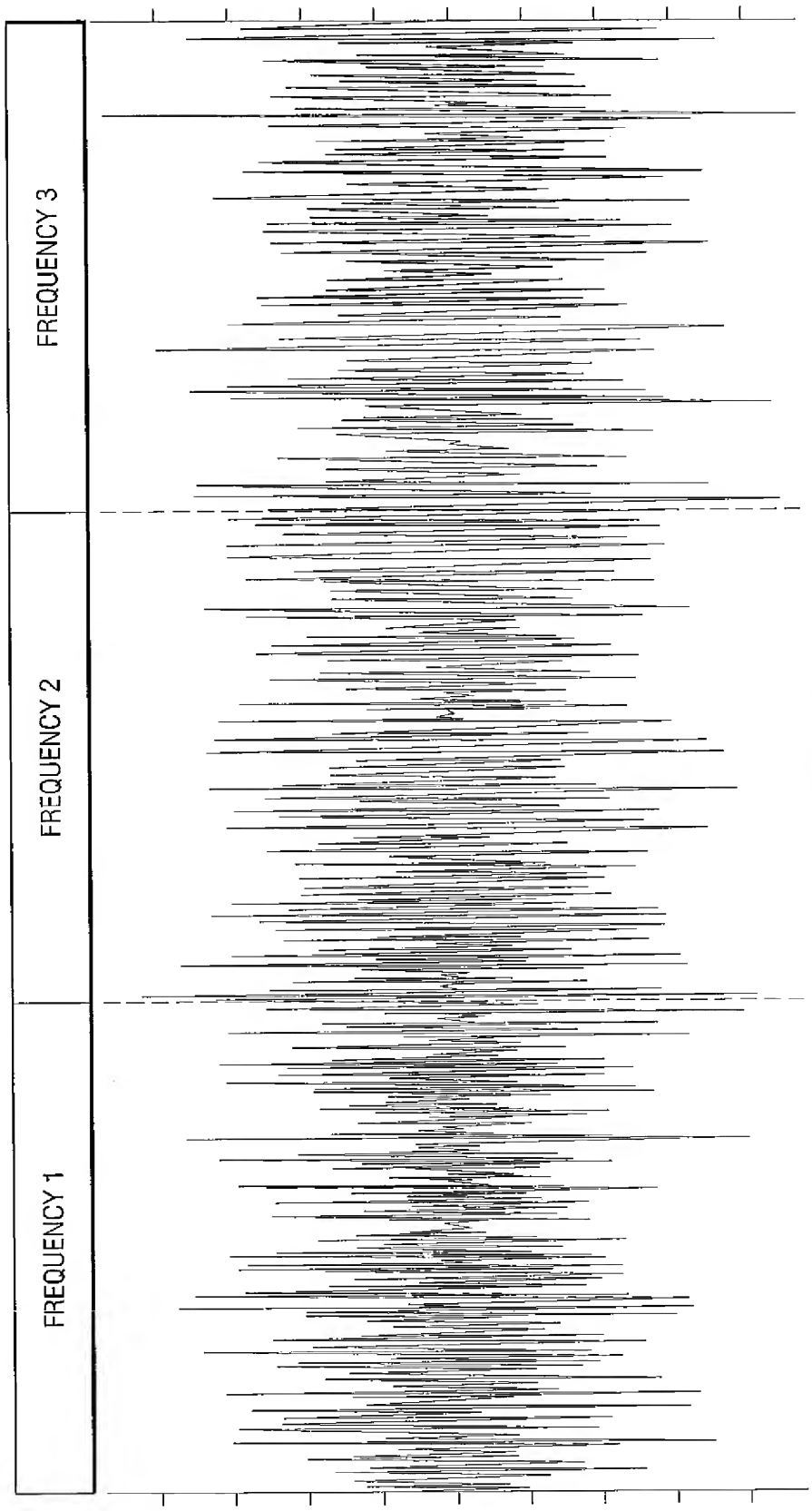

FIG. 4

	t0	t1	t2	t3	t4	t5	t6
CODE 1	0	1	2	3	4	5	6
CODE 2	0	2	4	6	1	3	5
CODE 3	0	3	6	2	5	1	4
CODE 4	0	4	1	5	2	6	3
CODE 5	0	5	3	1	6	4	2
CODE 6	0	6	5	4	3	2	1

FIG. 8

	t0	t1	t2	t3	t4	t5	t6
CODE 1	0	1	2	3	4	5	6
CODE 2	0	2	4	6	1	3	5
CODE 3	0	3	6	2	5	1	4
CODE 4	0	4	1	5	2	6	3
CODE 5	0	5	3	1	6	4	2
CODE 6	0	6	5	4	3	2	1

FIG. 9

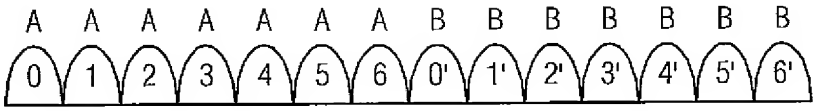

FIG. 10

	t0	t1	t2	t3	t4	t5	t6	t0'	t1'	t2'	t3'	t4'	t5'	t6'
CODE 1	0	1	2	3	4	5	6	0'	1'	2'	3'	4'	5'	6'
CODE 2	0	2	4	6	1	3	5	0'	2'	4'	6'	1'	3'	5'
CODE 3	0	3	6	2	5	1	4	0'	3'	6'	2'	5'	1'	4'
CODE 4	0	4	1	5	2	6	3	0'	4'	1'	5'	2'	6'	3'
CODE 5	0	5	3	1	6	4	2	0'	5'	3'	1'	6'	4'	2'
CODE 6	0	6	5	4	3	2	1	0'	6'	5'	4'	3'	2'	1'

FIG. 11

	t0	t1	t2	t3	t4	t5	t6	t0'	t1'	t2'	t3'	t4'	t5'	t6'
CODE 1	0	1	2	3	4	5	6	0'	1'	2'	3'	4'	5'	6'
CODE 2	0	2	4	6	1	3	5	0'	2'	4'	6'	1'	3'	5'
CODE 3	0	3	6	2	5	1	4	0'	3'	6'	2'	5'	1'	4'
CODE 4	0	4	1	5	2	6	3	0'	4'	1'	5'	2'	6'	3'
CODE 5	0	5	3	1	6	4	2	0'	5'	3'	1'	6'	4'	2'
CODE 6	0	6	5	4	3	2	1	0'	6'	5'	4'	3'	2'	1'

FIG. 12

	t0	t1	t2	t3	t4	t5	t6	t0'	t1'	t2'	t3'	t4'	t5'	t6'
CODE 1	0	1	2	3	4	5	6	0'	1'	2'	3'	4'	5'	6'
CODE 2	0	2	4	6	1	3	5	0'	2'	4'	6'	1'	3'	5'
CODE 3	0	3	6	2	5	1	4	0'	3'	6'	2'	5'	1'	4'
CODE 4	0	4	1	5	2	6	3	0'	4'	1'	5'	2'	6'	3'
CODE 5	0	5	3	1	6	4	2	0'	5'	3'	1'	6'	4'	2'
CODE 6	0	6	5	4	3	2	1	0'	6'	5'	4'	3'	2'	1'

FIG. 13

t0	t1	t2	t3	t4	t5	t6
0	1	2	3	4	5	6

FIG. 14

t0	t1	t2	t3	t4	t5	t6
0	1	2	3	4	5	0

FIG. 15

t0	t1	t2	t3	t4	t5	t6
0	1	2	0	1	2	0

FIG. 16

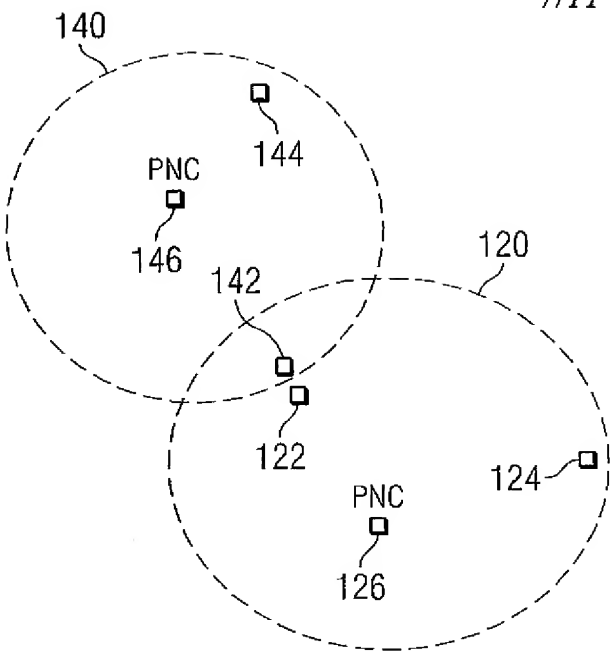

FIG. 17

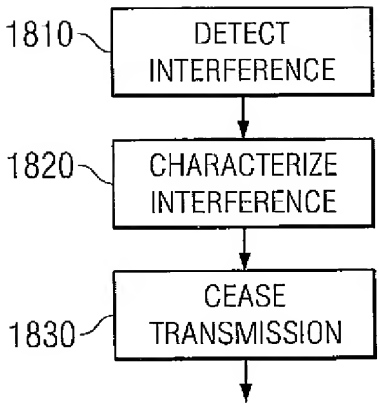

FIG. 18

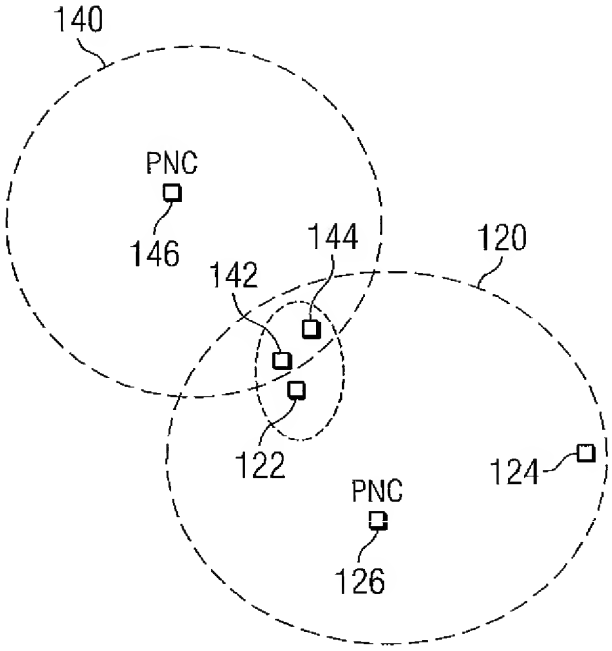

FIG. 19

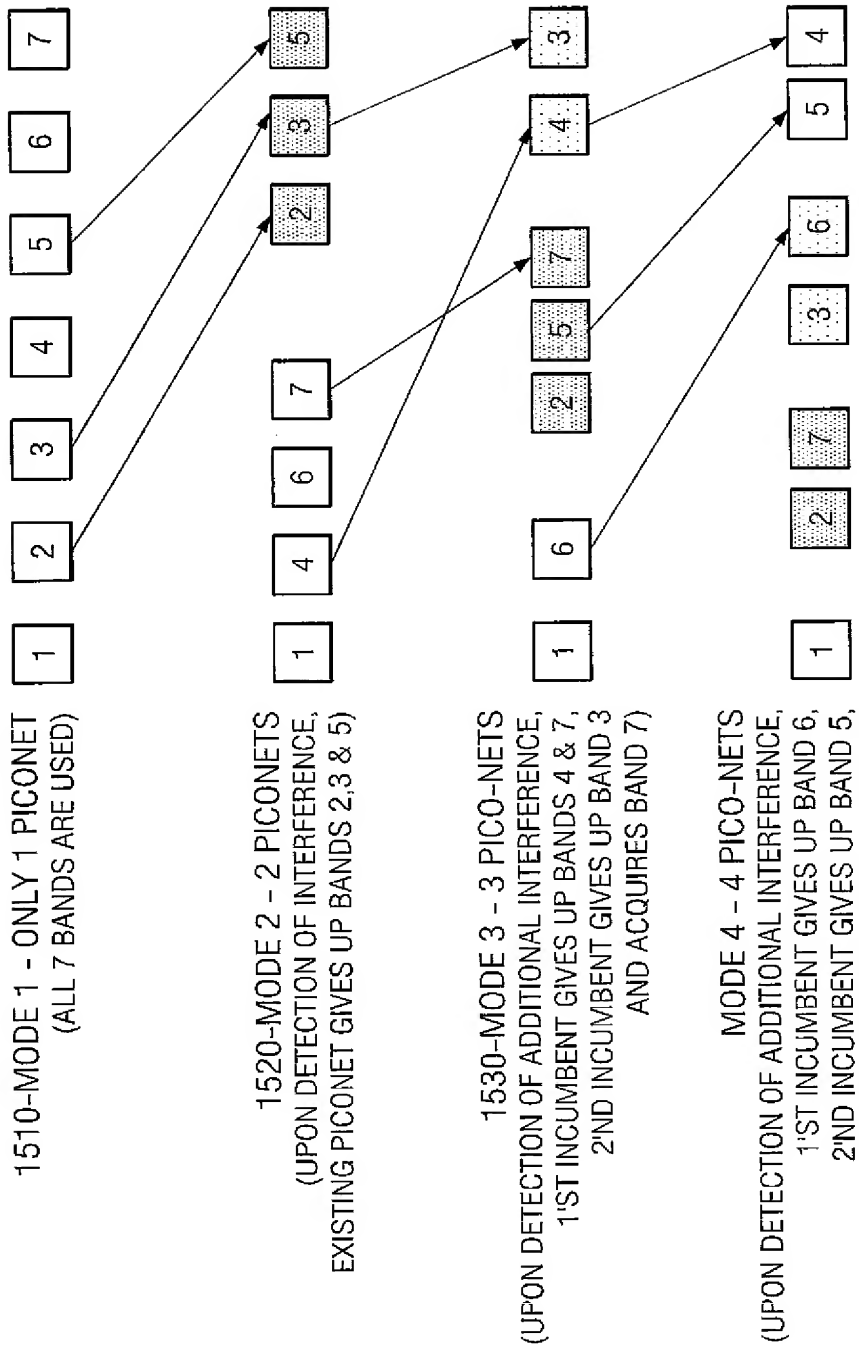
1510-MODE 1 - ONLY 1 PICONET
(ALL 7 BANDS ARE USED)
1
2
3
4
5
6
7
1520-MODE 2 - 2 PICONETS
(UPON DETECTION OF INTERFERENCE,
EXISTING PICONET GIVES UP BANDS 2,3 & 5)
1
4
6
7
2
3
5
1530-MODE 3 - 3 PICO-NETS
(UPON DETECTION OF ADDITIONAL INTERFERENCE,
1'ST INCUMBENT GIVES UP BANDS 4 & 7,
2'ND INCUMBENT GIVES UP BAND 3
AND ACQUIRES BAND 7)
1
6
2
5
7
4
3
MODE 4 - 4 PICO-NETS
(UPON DETECTION OF ADDITIONAL INTERFERENCE,
1'ST INCUMBENT GIVES UP BAND 6,
2'ND INCUMBENT GIVES UP BAND 5,
3'RD INCUMBENT GIVES UP BAND 4,
AND ACQUIRES BAND 6)
1
2
7
3
6
5
4

FIG. 20

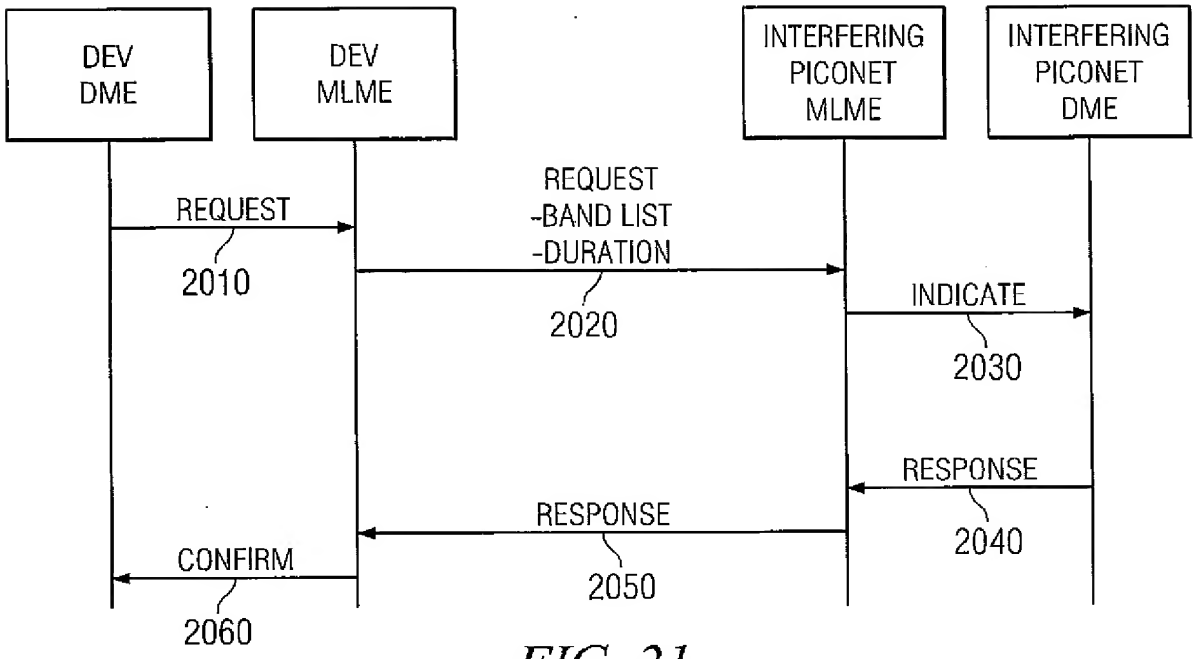
DEV
DME
DEV
MLME
INTERFERING
PICONET
MLME
INTERFERING
PICONET
DME
REQUEST
2010
REQUEST
-BAND LIST
-DURATION
2020
INDICATE
2030
RESPONSE
2040
RESPONSE
2050
CONFIRM
2060

FIG. 21

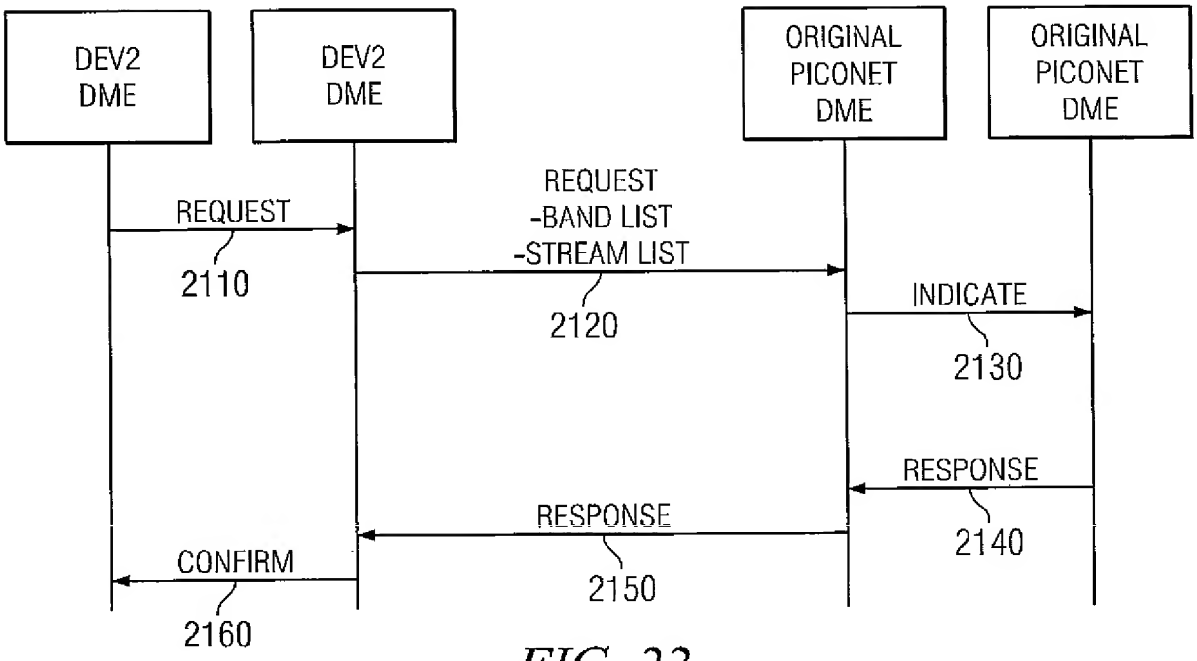
DEV2
DME
DEV2
DME
ORIGINAL
PICONET
DME
ORIGINAL
PICONET
DME
REQUEST
2110
REQUEST
-BAND LIST
-STREAM LIST
2120
INDICATE
2130
RESPONSE
2140
RESPONSE
2150
CONFIRM
2160

FIG. 22

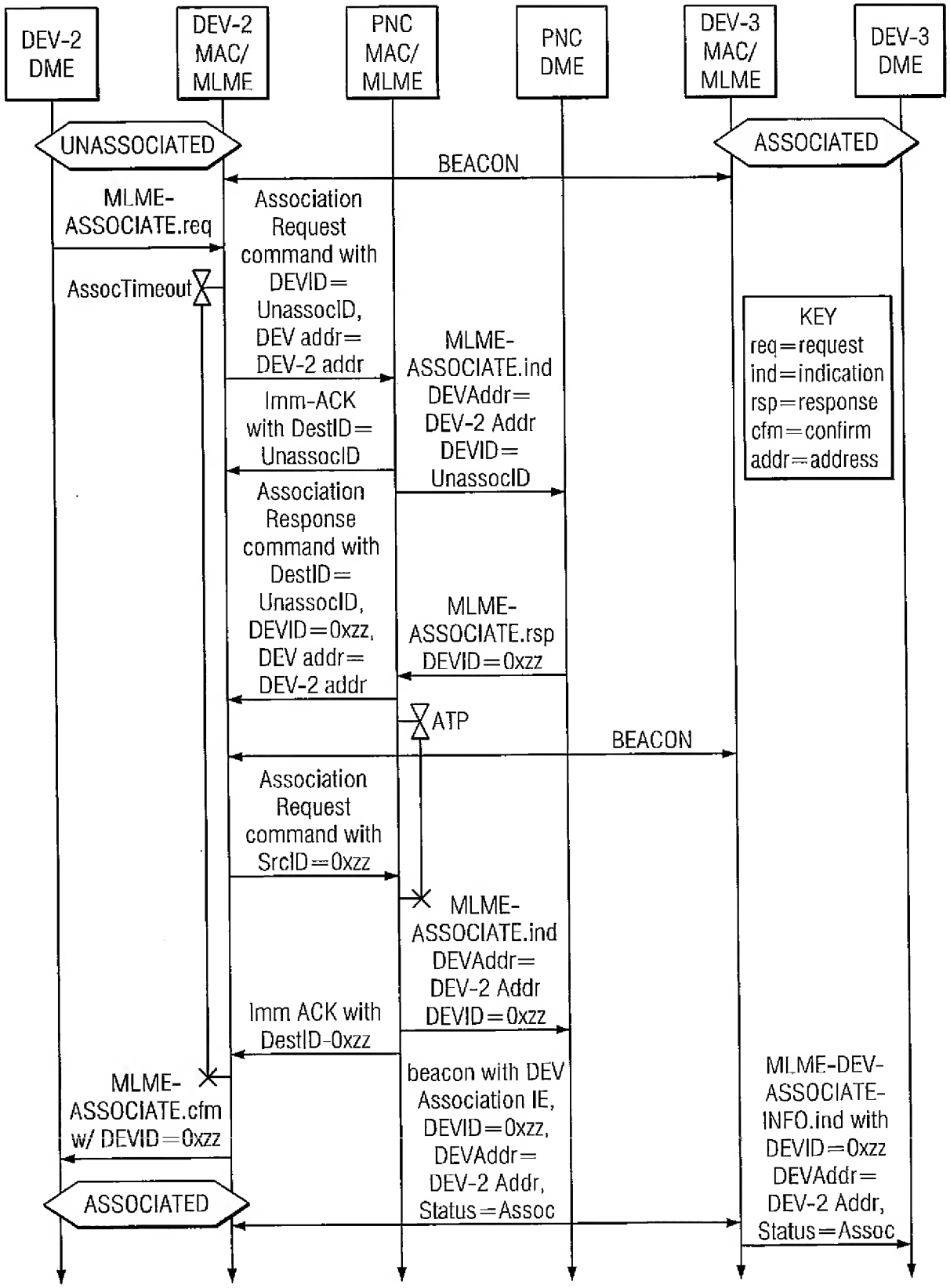
DEV-2 DME
DEV-2 MAC/ MLME
PNC MAC/ MLME
PNC DME
DEV-3 MAC/ MLME
DEV-3 DME
UNASSOCIATED
ASSOCIATED
BEACON
MLME-ASSOCIATE.req
Association Request command with DEVID=UnassocID, DEV addr=DEV-2 addr
AssocTimeout
MLME-ASSOCIATE.ind DEVAddr=DEV-2 Addr DEVID=UnassocID
Imm-ACK with DestID=UnassocID
KEY
req=request
ind=indication
rsp=response
cfm=confirm
addr=address
Association Response command with DestID=UnassocID, DEVID=0xzz, DEV addr=DEV-2 addr
MLME-ASSOCIATE.rsp DEVID=0xzz
ATP
BEACON
Association Request command with SrcID=0xzz
MLME-ASSOCIATE.ind DEVAddr=DEV-2 Addr DEVID=0xzz
Imm ACK with DestID-0xzz
MLME-ASSOCIATE.cfm w/ DEVID=0xzz
beacon with DEV Association IE, DEVID=0xzz, DEVAddr=DEV-2 Addr, Status=Assoc
MLME-DEV-ASSOCIATE-INFO.ind with DEVID=0xzz DEVAddr=DEV-2 Addr, Status=Assoc
ASSOCIATED

FIG. 23

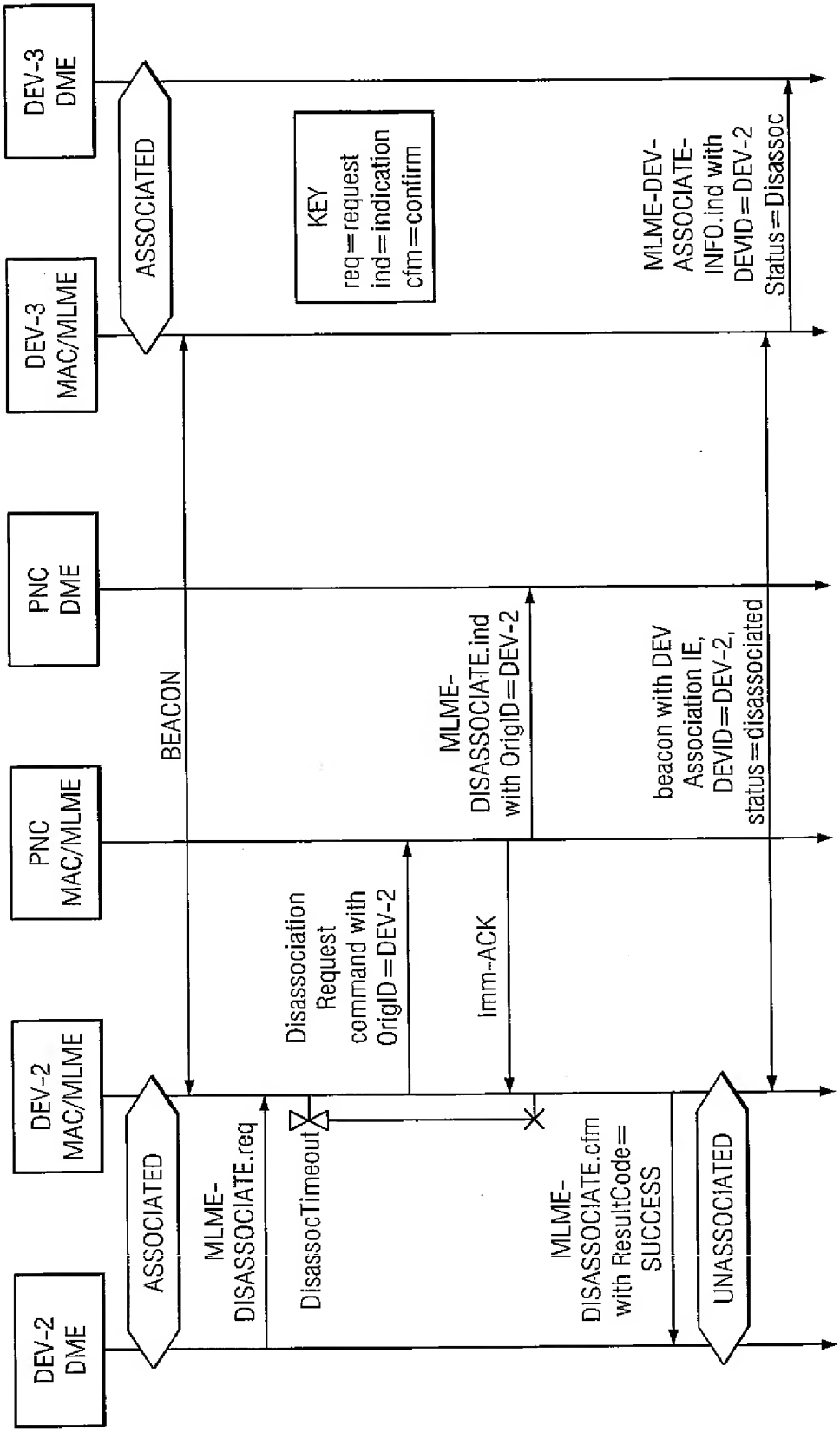
DEV-3 DME
DEV-3 MAC/MLME
PNC DME
PNC MAC/MLME
DEV-2 MAC/MLME
DEV-2 DME
ASSOCIATED
KEY
req=request
ind=indication
cfm=confirm
MLME-DEV-ASSOCIATE-INFO.ind with DEVID=DEV-2 Status=Disassoc
BEACON
MLME-DISASSOCIATE.ind with OrigID=DEV-2
beacon with DEV Association IE, DEVID=DEV-2, status=disassociated
Disassociation Request command with OrigID=DEV-2
Imm-ACK
MLME-DISASSOCIATE.req
DisassocTimeout
MLME-DISASSOCIATE.cfm with ResultCode=SUCCESS
UNASSOCIATED

FIG. 24